AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A propylene/1-butene random copolymer composition comprising 50 to 95% by weight of a propylene/1-butene random copolymer (A) and 5 to 50% by weight of a low-density polyethylene (B), the composition being for an extrusion coating, **a film obtained by extrusion coating said copolymer composition having a gloss of 128% to 134% when measured according to ASTM D 523,**

said propylene/1-butene random copolymer (A):

(1) comprising 60-90 mol% of structural units derived from propylene and 10-40 mol% of structural units derived from 1-butene;

(2) exhibiting a melt flow rate measured at 230°C under a load of 2.16 kg in accordance with ASTM D 1238 of 0.1 to 40 g/10 min;

(3) having a molecular weight distribution (Mw/Mn), measured by gel permeation chromatography (GPC), of up to 3;

(4) having a B-value, being a parameter indicating a randomness of copolymer monomer chain distribution, of 1.0 to 1.3;

(5) has a melting point Tm, measured by a differential scanning calorimeter, of 60 to 140°C,

said melting point, Tm, and a content of 1-butene structural units, M (mol%), satisfying the relationship:

$-2.6\ M + 130 \leq Tm \leq -2.3\ M + 155$; and

(6) has a crystallinity measured by X-ray diffractometry, C(%), said crystallinity and the content of 1-butene structural units, M (mol%), satisfying the relationship:

$C \geq -1.5\ M + 75$, and

said low-density polyethylene (B):

(1) exhibiting a melt flow rate measured at 190°C under a load of 2.16 kg in accordance with ASTM D 1238 of 1 to 25 g/10 min; and

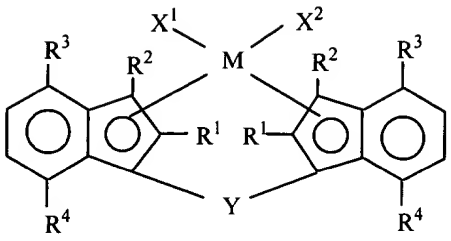
(2) having a density of 0.915-0.935 g/cm^3.

2. (Cancelled)

3. (Previously Presented) The propylene/1-butene random copolymer composition as claimed in claim 1, wherein the propylene/1-butene random copolymer (A) is obtained by copolymerizing propylene and 1-butene in the presence of an olefin polymerization catalyst,

said olefin polymerization catalyst comprising:

(a) a transition metal compound represented by the general formula:



. . . [I]

wherein:

M represents a transition metal of Group IVa, Va or VIA of the periodic table;

each of R^1 and R^2 independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms, a halogenated hydrocarbon group having 1 to 20 carbon atoms, a silicon-containing group, an oxygen-containing group, a sulfur-containing group, a nitrogen-containing group or a phosphorus-containing group;

each of R^3 independently represents a secondary or tertiary alkyl having 3 to 20 carbon atoms or an aromatic group having 6 to 20 carbon atoms;

each of R^4 independently represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms;

each of X^1 and X^2 independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms, a halogenated hydrocarbon group having 1 to 20 carbon atoms, an oxygen-containing group or a sulfur-containing group;

Y represents a divalent hydrocarbon group having 1 to 20 carbon atoms, a divalent halogenated hydrocarbon group having 1 to 20 carbon atoms, a divalent silicon-containing group, a divalent germanium-containing group, a divalent tin-containing group, -O-, -CO-, -S-, -SO-, $-SO_2-$, $-NR^5-$, $-P(R^5)-$, $-P(O)(R^5)-$, $-BR^5-$ or $-AlR^5-$ (wherein R^5 represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms or a halogenated hydrocarbon group having 1 to 20 carbon atoms), and

(b) an organoaluminum oxy compound (b-1) and/or a compound (b-2) capable of reacting with the transition metal compound (a) to thereby form an ion pair.

4. (Original) A composite film comprising a substrate film and, laminated onto at least one side thereof, a resin layer of the propylene/1-butene copolymer composition of claim 1, said resin layer having a thickness of 2 to 200 μm.

5. (Previously Presented) The propylene/1-butene random copolymer composition as claimed in claim 1, wherein the low-density polyethylene (B) comprises an ethylene homopolymer or a copolymer of ethylene and an α-olefin having 3 to 20 carbon atoms.

6. (Previously Presented) The propylene/1-butene random copolymer composition as claimed in claim 5, wherein the α-olefin is at least one selected from the group consisting of propylene, 1-butene, 1-pentene, 2-methyl-1-butene, 3-methyl-1-butene, 1-hexene, 3-methyl-1-pentene, 4-methyl-1-pentene, 3,3-dimethyl-1-butene, 1-heptene, methyl-1-hexene, dimethyl-1-pentene, trimethyl-1-butene, ethyl-1-pentene, 1-octene, methyl-1-pentene, dimethyl-1-hexene, trimethyl-1-pentene, ethyl-1-hexene, methylethyl-1-pentene, diethyl-1-butene, propyl-1-pentene, 1-decene, methyl-1-nonene, dimethyl-1-octene, trimethyl-1-heptene, ethyl-1-octene, methylethyl-1-heptene, diethyl-1-hexene, 1-dodecene and 1-hexadodecene.

7. (Original) The propylene/1-butene random copolymer composition as claimed in claim 1, which further comprises an antioxidant, an ultraviolet absorber, a lubricant, a nucleating agent, an antistatic agent, a flame retarder, a pigment, a dye or a filler.

8. (Original) The propylene/1-butene random copolymer composition as claimed in claim 7, wherein the filler is an organic filler or an inorganic filler.

9. (Currently Amended) A propylene/1-butene random copolymer composition comprising 50 to 95% by weight of a propylene/1-butene random copolymer (A) and 5 to 50% by weight of a low-density polyethylene (B), the composition being for an extrusion coating, **a film obtained by extrusion coating said copolymer composition having a gloss of 128% to 134% when measured according to ASTM D 523,**

said propylene/1-butene random copolymer (A):

(1) comprising 60-90 mol% of structural units derived from propylene and 24-40 mol% of structural units derived from 1-butene;

(2) exhibiting a melt flow rate measured at 230°C under a load of 2.16 kg in accordance with ASTM D 1238 of 0.1 to 40 g/10 min;

(3) having a molecular weight distribution (Mw/Mn), measured by gel permeation chromatography (GPC), of up to 3;

(4) having a B-value, being a parameter indicating a randomness of copolymer monomer chain distribution, of 1.0 to 1.3,

(5) has a melting point Tm, measured by a differential scanning calorimeter, of 60 to 140°C,

said melting point, Tm, and a content of 1-butene structural units, M (mol%), satisfying the relationship:

$-2.6\ M + 130 \leq Tm \leq -2.3\ M + 155$; and

(6) has a crystallinity measured by X-ray diffractometry, C(%), said crystallinity and the content of 1-butene structural units, M (mol%), satisfying the relationship:

$C \geq -1.5\ M + 75$, and

said low-density polyethylene (B):

(1) exhibiting a melt flow rate measured at 190°C under a load of 2.16 kg in accordance with ASTM D 1238 of 1 to 25 g/10 min; and

(2) having a density of 0.915-0.935 g/cm^3.

10. (Currently Amended) A propylene/1-butene random copolymer composition comprising 50 to 95% by weight of a propylene/1-butene random copolymer (A) and 5 to 50% by weight of a low-density polyethylene (B), the composition being for an extrusion coating, **a film obtained by extrusion coating said copolymer composition having a gloss of 128% to 134% when measured according to ASTM D 523,**

said propylene/1-butene random copolymer (A):

(1) comprising 60-90 mol% of structural units derived from propylene and 10-40 mol% of structural units derived from 1-butene;

(2) exhibiting a melt flow rate measured at 230°C under a load of 2.16 kg in accordance with ASTM D 1238 of 0.1 to 40 g/10 min;

(3) having a molecular weight distribution (Mw/Mn), measured by gel permeation chromatography (GPC), of up to 3;

(4) having a B-value, being a parameter indicating a randomness of copolymer monomer chain distribution, of 1.0 to 1.3;

(5) has a melting point Tm, measured by a differential scanning calorimeter, of 60 to 140°C,

said melting point, Tm, and a content of 1-butene structural units, M (mol%), satisfying the relationship:

$-2.6\ M + 130 \leq Tm \leq -2.3\ M + 155$; and

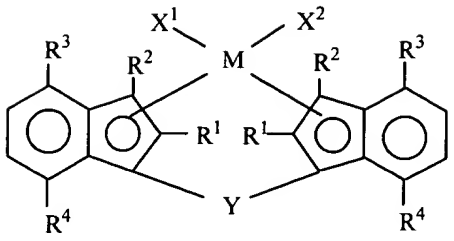
(6) has a crystallinity measured by X-ray diffractometry, C(%), said crystallinity and the content of 1-butene structural units, M (mol%), satisfying the relationship:

$C \geq -1.5\ M + 75$, and

the propylene/1-butene random copolymer (A) is obtained by copolymerizing propylene and 1-butene in the presence of an olefin polymerization catalyst,

said olefin polymerization catalyst comprising:

(a) a transition metal compound represented by the general formula:



. . . [I]

wherein:

M represents a transition metal of Group IVa, Va or VIA of the periodic table;

each of R^1 and R^2 independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms, a halogenated hydrocarbon group having 1 to 20 carbon atoms, a silicon-containing group, an oxygen-containing group, a sulfur-containing group, a nitrogen-containing group or a phosphorus-containing group;

each of R^3 independently represents a secondary or tertiary alkyl having 3 to 20 carbon atoms or an aromatic group having 6 to 20 carbon atoms;

each of R^4 independently represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms;

each of X^1 and X^2 independently represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms, a halogenated hydrocarbon group having 1 to 20 carbon atoms, an oxygen-containing group or a sulfur-containing group;

Y represents a divalent hydrocarbon group having 1 to 20 carbon atoms, a divalent halogenated hydrocarbon group having 1 to 20 carbon atoms, a divalent silicon-containing group, a divalent germanium-containing group, a divalent tin-containing group, -O-, -CO-, -S-, -SO-, $-SO_2-$, $-NR^5-$, $-P(R^5)-$, $-P(O)(R^5)-$, $-BR^5-$ or $-AlR^5-$ (wherein R^5 represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms or a halogenated hydrocarbon group having 1 to 20 carbon atoms), and

(b) an organoaluminum oxy compound (b-1) and/or a compound (b-2) capable of reacting with the transition metal compound (a) to thereby form an ion pair,

said low-density polyethylene (B):

(1) exhibiting a melt flow rate measured at 190°C under a load of 2.16 kg in accordance with ASTM D 1238 of 1 to 25 g/10 min; and

(2) having a density of 0.915-0.935 g/cm^3; and

(3) the low-density polyethylene (B) comprises an ethylene homopolymer or a copolymer of ethylene and an α-olefin having 3 to 20 carbon atoms, wherein the α-olefin is at least one compound selected from the group consisting of propylene, 1-butene, 1-pentene, 2-methyl-1-butene, 3-methyl-1-butene, 1-hexene, 3-methyl-1-pentene, 4-methyl-1-pentene, 3,3-dimethyl-1-butene, 1-heptene, methyl-1-hexene,

dimethyl-1-pentene, trimethyl-1-butene, ethyl-1-pentene, 1-octene, methyl-1-pentene, dimethyl-1-hexene, trimethyl-1-pentene, ethyl-1-hexene, methylethyl-1-pentene, diethyl-1-butene, propyl-1-pentene, 1-decene, methyl-1-nonene, dimethyl-1-octene, trimethyl-1-heptene, ethyl-1-octene, methylethyl-1-heptene, diethyl-1-hexene, 1-dodecene and 1-hexadodecene.

11. (Previously Presented) An extrusion coating comprising the composition of claim 1.

12. (Previously Presented) An extrusion coating comprising the composition of claim 9.

13. (Previously Presented) An extrusion coating comprising the composition of claim 10.

14. (New) A film comprising the propylene/1-butene random copolymer composition of claim 1.

15. (New) A film comprising the propylene/1-butene random copolymer composition of claim 9.

16. (New) A film comprising the propylene/1-butene random copolymer composition of claim 10.

REMARKS

This Preliminary Amendment accompanies a Request For Continued Examination. No new matter is believed to be added to the application by this Preliminary Amendment.

Status of the Claims

Claims 1 and 3-16 are pending in the application. Support for amended claims 1, 9 and 10 and for newly presented claims 14-16 can be found in Examples 1 and 2 and in Table 1 of the specification.

Rejections Under 35 U.S.C. §103(a) (paragraphs 2-10 of the Office Action of March 20, 2003)

Claims 1, 3-5, 7-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being obvious over EP '121 (EP 716121) in view of Sadatoshi (U.S. Patent No. 5,340,878) and either Yamamoto (U.S. Patent No. 5,656,696) or JP '656 (JP 54120656). Claim 6 is rejected under 35 U.S.C. §103(a) over EP' 121 in view Of Sadatoshi, Yamamoto, or JP '656, and further in view of Yoshimura (U.S. Patent 5,443,765). Claims 1, 3, 5, 7 and 8 are rejected under 35 U.S.C. §103(a) over Sugano (U.S. Patent 5,468,781) in view of EP' 121, Yamamoto, or JP '656. Claim 6 is rejected under 35 U.S.C. §103(a) over Sugano in view of EP' 121, Yamamoto or JP '656, as applied in paragraph 5 of the Office Action, and further

in view of Yoshimura. Claims 1, 4, 5, 7-9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '656 in view of EP '121. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '656 in view of EP '121 and further in view of Yoshimura. Claims 10 and 13 are rejected under 35 U.S.C. §103(a) over EP '121 in view of Sadatoshi and either Yamamoto, JP '656 or Yoshimura.

Applicants traverse.

Regarding Yamamoto, the Examiner admits that the iterations of the rejections incorporating the Yamamoto patent are overcome at page 2, lines 2-3 of the Advisory Action mailed July 7, 2003.

The present invention as embodied in instantly amended independent claims 1, 9 and 10 pertains to:

> A propylene/1-butene random copolymer composition comprising 50 to 95% by weight of a propylene/1-butene random copolymer (A) and 5 to 50% by weight of a low-density polyethylene (B), the composition being for an extrusion coating, a film obtained by extrusion coating said copolymer composition having a gloss of 128% to 134% when measured according to ASTM D 523 . . . See Claim 1, 9 or 10.

Distinctions of the invention over the cited art are of record in the application. None of the cited art discloses or suggests a random copolymer composition than can produce a film having a gloss of 128% to 134%.

EP '121 is completely silent on both the use of low density polyethylene and the effectiveness of extrusion coating to obtain a film having a gloss of 128 to 134%.

Sadatoshi enhances the transparency of propylene polymer by adding a small amount of polyethylene to propylene polymer. The amount of added polyethylene is lower than 4 wt% (0.01-4 wt%), and it is particularly lower than 1 wt% in the Examples of Sadatoshi. This low level of polyethylene is fundamentally different from the 5 to 50% by weight of a low-density polyethylene (LDPE) of the invention. In contrast, Sadatoshi teaches away from the invention by stating that raising the amount of polyethylene over 4 wt% reduces the transparency. See Sadatoshi at column 3, lines 47-49.

Moreover, Sadatoshi fails to disclose or suggest that the resin composition can be utilized as an extrusion coating or a laminated film. Sadatoshi is further silent regarding an extrusion coating film having a gloss of 128% to 134%.

JP '656 pertains to a propylene/1-butene copolymer prepared using a fundamentally different catalyst from the invention: a Ziegler-Natta catalyst. As a result, the copolymer produced according to JP '656 fails to satisfy the molecular weight distribution (Mw/Mn) and B values of the invention. See, e.g., claim 1.

Additionally, JP '656 is utterly silent regarding the effectiveness of the optical properties. That is, JP '656 fails

to disclose or suggest an extrusion coating film have a gloss of 128% to 134%, which is achieved through the molecular weight distribution (Mw/Mn) and B values of the invention such as is set forth under numerals (3) and (4) of claim 1.

As a result, the claimed invention is the fruit of fundamentally different objectives attained using fundamentally different techniques from the cited art. A person having ordinary skill in the art would therefore have no motivation to combine the applied art in the fashion posited by the Examiner. A *prima facie* case of obviousness has thus not been made over the applied art.

Further, even if it is assumed *arguendo* that the applied art is sufficient to allege *prima facie* obviousness, unexpected results rebut this obviousness. These unexpected results have been discussed earlier (See the Reply filed June 19, 2003, pages 3-9) and also include an extrusion coating film having a gloss of 128% to 134%, which is set forth independent claims 1, 9 and 10.

Accordingly, these rejections are overcome and withdrawal thereof are respectfully requested.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned below, to

conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment(s)